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10/565,808	01/25/2006	Walter Apfelbacher	32860-000986/US	9694

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EXAMINER

MAI, TIEN HUNG

ART UNIT	PAPER NUMBER
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2836

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08/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,808	Applicant(s) APFELBACHER ET AL.	
	Examiner TIEN MAI	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response of 06/10/2008 has been entered in the record and considered. Upon entering amendment, claims 1 and 19 have been amended; drawing objections, and specification objections have been withdrawn.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the mechanical interlock must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The substitute specification filed 06/10/2008 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: a monitoring device 12 is not shown in the drawings.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Detailed description does not disclose “a mechanical interlock” as recited in claim 1, and summary of invention only briefly mentions “a mechanical interlock between the fused load disconnecter and the basic mount, the device can be replaced only when the fused load disconnecter is open” (paragraph [0021]). The specification just repeats the claim language, and does not disclose how the mechanical interlock between the

disconnection device and the terminals allows removal of the protective switching device from the appliance.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not understood what is meant by "a mechanical interlock between the disconnection device and the terminals that allows removal of the protective switching device from the appliance only when the disconnection device is in an open state". It is not clear how the mechanical interlock allows removal of the protective switching device from the appliance, since mechanical interlock is an element of the protective switching device, and the protective switching device is not part of the appliance. The only element which seems to be removable from the protective switching device is the protective device (fuse). For examination purposes, the above limitation is interpreted as "a mechanical interlock between the disconnection device and the terminals that allow removal of the protective device (3)". The mechanical interlock will be interpreted as a part of the fuse holder.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-3, 5-11, 13-15, 17, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Narusevicius et al. (US 2003/0119382, "Narusevicius").

11. **In re claims 1 and 19**, Narusevicius discloses medium voltage motor control center cold-welded electrical connector and method, the apparatus (fig. 2) comprises: an operating switching device (210) to switch a load (220) on and off; a disconnection device (fuse holder as shown in figs. 19-23) to disconnect an input terminal from an output terminal, connectable to the load to be driven; and a protective device (206) to protect the load to be driven against short circuits, wherein the protection device include a fuse (206A-206C) in each phase for disconnection in the event of a short circuit, with the operating switching device, the disconnection device and the protective device being connected in series and being integrated in a housing (see fig. 3) (abstract); and a mechanical interlock (element 2006 in fig. 20A) between the disconnection device and the terminals that allow removal of the protective device when the disconnection device is in the open state ([0091]).

12. **In re claim 2**, Narusevicius discloses that the protective device includes an electromechanical switching device (214).

13. **In re claims 3, 17 and 20**, Narusevicius discloses the fuse is removable from the housing ([0013] and [0091]).

14. **In re claim 5**, Narusevicius discloses the protective device is arranged between the disconnection device and the output terminal to the load to be driven (see fig. 2).

15. **In re claim 6**, when the disconnection device in the open state, disconnects and releases the at least one fuse from at least one contact for removal is inherent to Narusevicius's system because the disconnection device is employed to provide safety reason ([0091]).

16. **In re claim 7**, Narusevicius discloses that a slide mechanism for opening and closing the disconnection device (see fig. 20B).

17. **In re claim 8**, Narusevicius discloses the fuse is cylindrical form (see fig. 19).

18. **In re claim 9**, Narusevicius discloses the disconnection device includes the functionality of a fused load disconnecter (see figs. 20A and 20B).

19. **In re claim 10**, Narusevicius discloses the disconnection device includes two disconnection points (see fig. 19).

20. **In re claim 11**, Narusevicius discloses the fuse is arranged in a moving part (fuse holder) of the disconnection device (see fig. 20B).

21. **In re claim 13**, electronic switching points are bridgeable by mechanical device is inherent property in Narusevicius's contactor (210).

22. **In re claim 14**, Narusevicius discloses an overload device (temperature sensor 2714 shown in fig. 27 and [0107]).

23. **In re claim 15**, an overload relay is inherent to Narusevicius's system (fig. 27).

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusevicius in view of Jehlicka et al. (US 6,710,698, "Jehlicka").

26. **In re claims 4 and 18**, Narusevicius discloses the limitations as discussed above. Narusevicius does not explicitly teach the fuse is a semiconductor protective fuse. Jehlicka teaches several advantages of a semiconductor fuse, i.e., the semiconductor fuse does not require replacing after being tripped, and is ready for operation again right away (col. 1, lines 45-62). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Narusevicius and employ a semiconductor fuse, as taught by Jehlicka, because the semiconductor fuse does not have to be replaced after being tripped, and is ready for operation again right away (col. 1, lines 45-62).

27. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narusevicius in view of Price (US 4,317,076, "Price").

28. **In re claim 12**, Narusevicius discloses the limitation as discussed above. Narusevicius does not teach a monitor device for recording of tripping of the fuse. Price discloses a fuse is monitored continuously by voltmeter to indicate a blown fuse

condition (col. 2, lines 25-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Narusevicius and employ a monitoring device, as taught by Price, in order to provide indication of blown fuse to personnel.

29. Claim 1-3, 5-11, 13, 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti (US 6,108,206, "Criniti") in view of Combas (US 5,969,587, "Combas").

30. **In re claim 1-3, 5-9, 11, 17, 19 and 20**, Criniti discloses semiconductor thermal protection arrangement; the apparatus (fig. 1 and 2) comprising: an operating switching device (15) to switch a load (11) on and off; and a protective device (21) to protect the load to be driven against short circuit, wherein the protective device including a fuse (22) in each phase for disconnection in the event of a short circuit, with the operating switching device, and the protective device being connected in series and being integrated in a housing (14) and wherein the protective device is an electromechanical switching device (8). Criniti does not explicitly disclose a disconnection device and a mechanical interlock between the disconnection device and the terminals that allow the fuse is removable from the housing; when the disconnection device in the open state; and the fuse is in the form of a cylindrical fuse. Combas discloses a fuse holder (fused load disconnecter) (114), which inherently has a disconnection device and a mechanical interlock, the fuse holder having a cylindrical fuse (116), when the fuse holder in the open state, disconnects and release the fuse from contact for removal and wherein the

fuse holder includes a slide mechanism (138B) for opening and closing (see fig. 12). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ removable mechanism, as taught by Combas, in order to provide easier replacement of the fuse by an operator.

31. **In re claim 10**, Combas discloses that the disconnection device includes two disconnection points.

32. **In re claim 13**, Criniti discloses electronic switching points are bridgeable by mechanical contacts (see on/off switch 18).

33. **In re claim 16**, Criniti and Combas disclose the limitations as discussed above except for at least one of current paths has no operating switching device. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to eliminate one of the operating switching devices and its function, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

34. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Jehlicka.

35. **In re claims 4 and 18**, Criniti discloses the limitations as discussed above. Criniti does not explicitly teach the fuse is a semiconductor protective fuse. Jehlicka teaches several advantages of a semiconductor fuse, i.e., the semiconductor fuse does not require replacing after being tripped, and is ready for operation again right away

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(col. 1, lines 45-62). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Criniti and employ a semiconductor fuse, as taught by Jehlicka, because the semiconductor fuse does not have to be replaced after being tripped, and is ready for operation again right away (col. 1, lines 45-62).

36. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Price.

37. **In re claim 12**, Criniti and Combas disclose the limitation as discussed above. Neither Criniti nor Combas explicitly teach a monitor device for recording of tripping of the fuse. Price discloses a fuse is monitored continuously by voltmeter to indicate a blown fuse condition (col. 2, lines 25-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ a monitoring device, as taught by Price, in order to provide indication of blown fuse to personnel.

38. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Criniti and Combas in view of Chung (US 2002/0093774, "Chung").

39. **In re claims 14 and 15**, Criniti and Combas disclose the limitations as discussed above. Neither Criniti nor Combas explicitly disclose an overload device. Chung discloses an overload device (14) having an overload relay for monitoring an overload during an operation of motor (16) to determine whether there is an error in the source

current supplies to the motor so that the motor is protected. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Criniti and employ overload device, as taught by Chung, in order to protect the motor from overload.

Response to Arguments

40. Applicant's arguments filed 06/10/2008 have been fully considered but they are not persuasive for the reasons stated below.

41. Applicant argues that “Narusevicius does not disclose or suggest a mechanical interlock between the disconnection device and the terminals that allows removal of the protective switching device from the appliance only when the disconnection device is in an open state”. As discussed above, the claims are rejected under 35 U.S.C. 112, first and second paragraphs, since the detail description does not disclose “a mechanical interlock” as recited in claim 1, and summary of invention only briefly mentions the phrase “a mechanical interlock”. Therefore, the examiner is unsure what applicant is trying to claim. As discussed in claim rejections, Narusevicius discloses a mechanical interlock (element 2006 in fig. 20A) between the disconnection device and the terminals that allow removal of the protective device when the disconnection device is in the open state ([0091]).

42. Applicant also argues that “Criniti and Combas fails to disclose or suggest a mechanical interlock between the disconnection device and the terminals that allows removal of the protective switching device from the appliance only when the

disconnection device is in an open state”. As discussed above, the claims are rejected under 35 U.S.C. 112, first and second paragraphs, since the detail description does not disclose “a mechanical interlock” as recited in claim 1, and the summary of invention only briefly mentions the phrase “a mechanical interlock”. Therefore, the examiner is unsure what applicant is trying to claim. As discussed in the claim rejections, Combas discloses a fuse holder (fused load disconnecter), which inherently has a disconnection device, i.e., part of the fuse holder, and a mechanical interlock, i.e., keeping the fuse holder in place, when the fuse holder in the open state, disconnects and release the fuse from contact for removal and wherein the fuse holder includes a slide mechanism for opening and closing.

43. Similar arguments apply to claim 19.

44. For the reasons discussed above, the rejections are maintained.

Conclusion

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

46. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIEN MAI whose telephone number is (571)270-1277.

The examiner can normally be reached on M-Th: 7:00-5:00.

48. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

/Tien Mai/
Examiner, Art Unit 2836